LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-43: (Canceled).

44. (New) A method for the treatment of chronic renal failure, said method comprising administering a pharmaceutical composition comprising a subpolycythemic erythropoietin dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight to a subject in need of said treatment.

45. (New) A method for the treatment of acute renal failure, said method comprising administering a pharmaceutical composition comprising a subpolycythemic erythropoietin dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight to a subject in need of said treatment.

46. (New) A method for wound healing, said method comprising administering a pharmaceutical composition comprising a subpolycythemic erythropoietin dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight to a subject in need of said wound healing.

47. (New) A method for therapeutic treatment of a condition selected from the group consisting of hypercholesterolemia, diabetes mellitus, endothelium-mediated chronic inflammatory disorders, endotheliosis including reticuloendotheliosis, atherosclerosis, ischemic disorders of the extremities, preeclampsia, Raynaud's disease and pregnancy-induced hypertension, said method comprising administering a pharmaceutical composition comprising a subpolycythemic erythropoietin dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight to a subject in need of said therapeutic treatment.

48. (New) The method of claim 44, wherein the pharmaceutical composition is administered parenterally.

49. (New) The method of claim 48, wherein said parenteral administration is carried out using a mode selected from the group consisting of intravenous, intramuscular, intracutaneous and subcutaneous, administration.

50. (New) The method of claim 45, wherein the pharmaceutical composition is administered parenterally.

51. (New) The method of claim 50, wherein said parenteral administration is carried out using a mode selected from the group consisting of intravenous, intramuscular, intracutaneous and subcutaneous, administration.

52. (New) The method of claim 46, wherein the pharmaceutical composition is administered parenterally.

53. (New) The method of claim 52, wherein said parenteral administration is carried out using a mode selected from the group consisting of intravenous, intramuscular, intracutaneous and subcutaneous, administration.

54. (New) The method of claim 47, wherein the pharmaceutical composition is administered parenterally.

55. (New) The method of claim 54, wherein said parenteral administration is carried out using a mode selected from the group consisting of intravenous, intramuscular, intracutaneous and subcutaneous, administration.

56. (New) The method of claim 48, where the pharmaceutical composition is in a form selected from the group consisting of an injectable form and an infusible form.

57. (New) The method of claim 44, where the pharmaceutical composition is administered via pulmonary administration.

58. (New) The method of claim 45, where the pharmaceutical composition is administered via pulmonary administration.

59. (New) The method of claim 46, where the pharmaceutical composition is administered via pulmonary administration.

60. (New) The method of claim 47, where the pharmaceutical composition is administered via pulmonary administration.

61. (New) The method of claim 57, where the pharmaceutical composition is in a form selected from the group consisting of an aqueous solution, a nonaqueous solution and a powder.

62. (New) The method of claim 57, where the pharmaceutical composition is in an aerosol form.

63. (New) The method of claim 44, wherein the pharmaceutical composition is orally administered.

64. (New) The method of claim 45, wherein the pharmaceutical composition is orally administered.

65. (New) The method of claim 46, wherein the pharmaceutical composition is orally administered.

66. (New) The method of claim 47, wherein the pharmaceutical composition is orally administered.

67. (New) The method of claim 63, where the pharmaceutical composition is in a form selected from the group consisting of a solution, a suspension, an emulsion and a tablet.

68. (New) The method of claim 44, where the pharmaceutical composition comprises at least one

further active ingredient which stimulates endothelial progenitor cells.

69. (New) The method of claim 45, where the pharmaceutical composition comprises at least one further active ingredient which stimulates endothelial progenitor cells.

70. (New) The method of claim 46, where the pharmaceutical composition comprises at least one further active ingredient which stimulates endothelial progenitor cells.

71. (New) The method of claim 47, where the pharmaceutical composition comprises at least one further active ingredient which stimulates endothelial progenitor cells.

72. (New) The method of claim 68, where the further active ingredient is selected from the group consisting of VEGF, PIGF, GM-CSF, an HMG-CoA reductase inhibitor and an NO donor.

73. (New) The method of claim 72, wherein the further active ingredient is the HMG-CoA reductase inhibitor and wherein said inhibitor is a statin.

74. (New) A method for producing a transplantable endothelial cell preparation, which method comprises applying erythropoietin to an endothelial cell preparation.

75. (New) The method of claim 74, wherein endothelial cells are produced in vitro by cultivating endothelial progenitor cells in the presence of erythropoietin.

76. (New) The method of claim 75, where the cultivation of the endothelial progenitor cells takes place in the presence of at least one further active ingredient selected from the group consisting of VEGF, PIGF, GM-CSF, an HMG-CoA reductase inhibitor and an NO donor.

77. (New) A method for at least one of pretreating and further treating tissue or organ transplants, which method comprises applying erythropoietin to a tissue or organ transplant.

78. (New) The method of claim 77, wherein the pretreatment of the tissue or organ transplant is carried out with use of isolated endothelial progenitor cells.

79. (New) A method for producing at least one of an implantable and transplantable cell-containing in vitro organ or tissue system, wherein an in vitro organ or tissue system is treated with erythropoietin, before transplantation or implantation, to induce at least one of vasculogenesis and endothelial cell formation.

80. (New) The method of claim 79, wherein the at least one of in vitro organ or tissue systems comprises endothelial progenitor cells.

81. (New) A method for producing at least one of vascular prostheses and heart valves, said method comprising coating a vascular prostheses or a heart valve with erythropoietin.

82. (New) The method of claim 81, where the coating of the vascular prostheses or heart valve additionally comprises endothelial progenitor cells.

83. (New) A method for at least one of stimulating physiological mobilization of endothelial progenitor cells, proliferation of endothelial progenitor cells, differentiation of endothelial progenitor cells to endothelial cells and migration of endothelial progenitor cells in the direction of an angiogenic or vasculogenic stimulus, which method comprises applying to the cells at least one of erythropoietin and a derivatives thereof in a subpolycythemic EPO-dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight.

84. (New) The method of claim 83, wherein an adhesion ability of differentiating endothelial progenitor cells is increased.

85. (New) The method of claim 83, wherein stimulation of endothelial progenitor cells leads to the formation of endothelial tissue.

86. (New) The method of claim 83, wherein stimulation of endothelial progenitor cells leads to the formation of new blood vessels.

87. (New) A method for stimulating formation of endothelial tissue, which method comprises administering a pharmaceutical composition comprising a subpolycythemic EPO-dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight to a subject in need of said stimulation.

88. (New) The method of claim 44, wherein the erythropoietin is human or animal erythropoietin.

89. (New) The method of claim 45, wherein the erythropoietin is human or animal erythropoietin.

90. (New) The method of claim 46, wherein the erythropoietin is human or animal erythropoietin.

91. (New) The method of claim 47, wherein the erythropoietin is human or animal erythropoietin.

92. (New) The method of claim 87, wherein the erythropoietin is selected from the group consisting of a derivative, an analog, a modification and a mutein of erythropoietin.

93. (New) The method of claim 87, wherein said erythropoietin is isolated from a source selected from the group consisting of human urine, urine or plasma of patients suffering from aplastic anemia, tissue cultures of human renal cancer cells, human lymphoblast cells having the ability to produce human erythropoietin and a hybridoma culture obtained by cell fusion of a human cell line.

94. (New) The method of claim 87, wherein the erythropoietin is produced by DNA recombination techniques.

95. (New) A pharmaceutical composition for use in at least one of stimulating endothelial progenitor cells, stimulating formation of endothelial tissue, stimulating vasculogenesis and treating diseases or

pathological states associated with a dysfunction of endothelial progenitor cells, said composition comprising at least one of erythropoietin, a derivative, an analog, a modification and a mutein thereof as an active ingredient in a subpolycythemic EPO-dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight, and at least one further active ingredient selected from the group consisting of VEGF, PIGF, GM-CSF, an HMG-CoA reductase inhibitor and an NO donor.

96. (New) A pharmaceutical composition for at least one of preventing and treating a condition selected from the group consisting of hypercholesterolemia, diabetes mellitus, endothelium-mediated chronic inflammatory disorders, endotheliosis including reticuloendotheliosis, atherosclerosis, ischemic disorders of the extremities, preeclampsia, Raynaud's disease, pregnancy-induced hypertension, chronic or acute renal failure, including terminal renal failure, wound healing and sequelae thereof, said composition comprising at least one of erythropoietin, a derivative, an analog, a modification and a mutein thereof as an active ingredient in a subpolycythemic EPO-dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight.

97. (New) The pharmaceutical composition of claim 96, additionally comprising a further active ingredient selected from the group consisting of VEGF, PIGF, GM-CSF, an HMG-CoA reductase inhibitor and an NO donor.

98. (New) The pharmaceutical composition of claim 95, wherein the HMG-CoA reductase inhibitor is a statin.

99. (New) The pharmaceutical composition of claim 97, wherein the HMG-CoA reductase inhibitor is a statin.

100. (New) The pharmaceutical composition of claim 95, wherein the NO donor is L-arginine.

101. (New) The pharmaceutical composition of claim 97, wherein the NO donor is L-arginine.

102. (New) A method for stimulating vasculogenesis, which method comprises administering at least one of erythropoietin and derivatives thereof in a subpolycythemic EPO-dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight to a subject in need of said stimulation.

103. (New) A method for therapeutic treatment of at least one of pathological states and diseases of the human or animal body, which are associated with a dysfunction of endothelial progenitor cells, wherein said method comprises administering erythropoietin in a subpolycythemic EPO-dosis corresponding to a weekly dosis of 1 to 90 international units (IU) EPO/kg body weight to a subject in need of said treatment.

104. (New) The method of claim 103, where the dysfunction of endothelial progenitor cells includes at least one of an impaired ability to proliferate, an impaired ability to differentiate to endothelial cells, an impaired ability to adhere and an impaired ability to migrate in the direction of a vasculogenic or angiogenic stimulus.

105. (New) The method of claim 103, where the dysfunction of endothelial progenitor cells impairs or prevents formation of at least one of endothelial tissue and blood vessels.

106. (New) The method of claim 103, where the dysfunction of endothelial progenitor cells has a pathogenic cause.

107. (New) The method of claim 103, wherein the pathological states or diseases associated with a dysfunction of endothelial progenitor cells are selected from the group consisting of hypercholesterolemia, diabetes mellitus, endothelium-mediated chronic inflammatory disorders, endotheliosis including reticuloendotheliosis, atherosclerosis, ischemic disorders of the extremities, preeclampsia, Raynaud's disease, pregnancy-induced hypertension, chronic or acute renal failure, including terminal renal failure, wound healing and sequelae thereof.